



هيئة تنظيم الخدمات العامة  
Authority for Public Services Regulation



# Navigating Power Grid Scarcity

**Oman experiences with RES integration**

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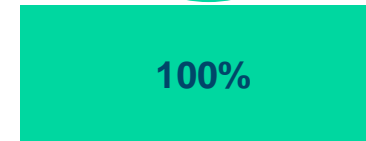
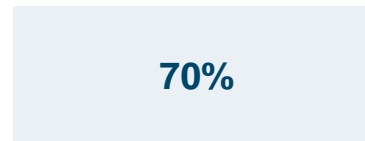
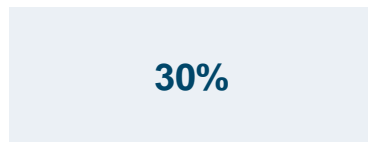
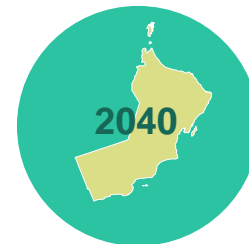
# RES deployment and targets



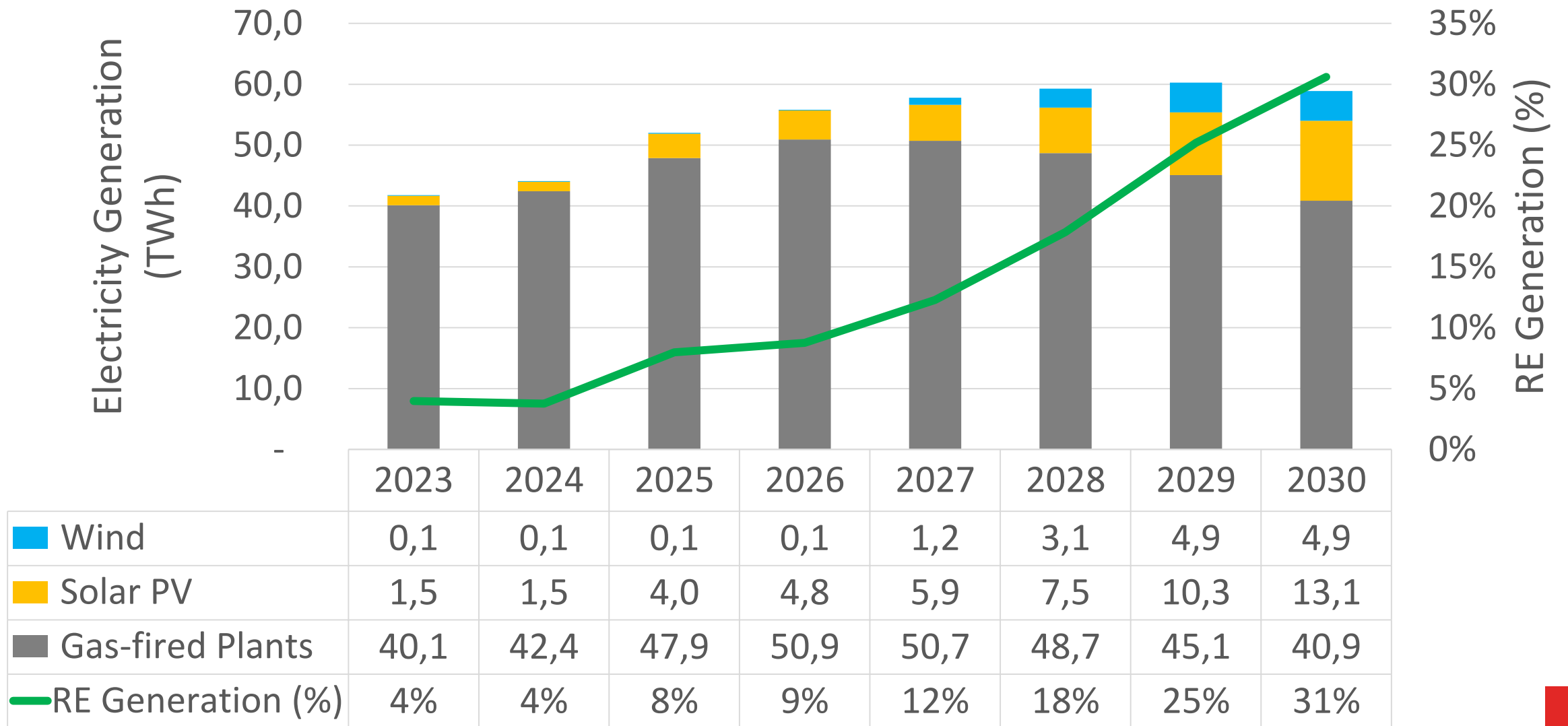
Oman 2040  
Vision  
RE Targets

National  
Strategy Net  
zero by 2050

National  
Energy  
Transition  
Policy



# Fuel Shares in Electricity Generation



# Current/future issues caused by RES integration



- ❑ Impacting the system reliability and security.
- ❑ Impacting the overall system inertia.
- ❑ Impacting the generation flexibility.
- ❑ Impacting the system reserves (capacity reserve & spinning reserve).
- ❑ Triggering additional ancillary services requirements.
- ❑ New Policy for Direct Sale & Wheeling of large scale RE (Grid Congestion)





# Current/future issues caused by RES integration

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- ❑ **Reserve** : Increment the reserve catering for the combined effect of RE and load variations.
- ❑ **Flexible Operation** : Adopt a more flexible operation of the thermal generators, allowing for more renewable generation.
- ❑ **RES Curtailment** : Consider the RES curtailment necessary to resolve problems of over-generation and overloads under certain specific conditions (high-level of renewable generation).
- ❑ **Weather Forecast** : Develop weather forecast capabilities supporting high quality day-ahead forecast of renewable generation (optimised RES intermittency operational management).
- ❑ **International Interconnection** GCCIA ( 400 MW to 2000 MW)
- ❑ **Energy Storage** ( BESS & PHS)



Thank You

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